FOUR LETTERS TO LIVE BY

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Injuries occur often during sport. It is therefore important that all athletes and coaches have a basic knowledge of what to do should an injury occur. This knowledge can be as simple as remembering four letters: R.I.C.E. Application of the correct protocol immediately following injury may mean the difference between a week off and a month or even longer off.

Most sports injuries are classified as soft tissue injuries, i.e. injuries to ligaments, muscles and tendons. The 24 to 48 hours following injury can be the most important. Applying the correct treatment during this time will decrease the amount of swelling, bleeding and pain and can help you heal quicker. Because a physio isn't always there it is vital that everyone knows the basics of management.

The main focus of the R.I.C.E protocol is the reduction of swelling. Swelling resulting in pain because the swelling compresses the nerve endings and chemicals released when swelling occurs irritate the nerve endings. It can also lead to cell death, decreased range of motion and decreased muscle strength.

What is R.I.C.E?

R.I.C.E is an acronym that stands for rest, ice, compression, elevation. It is the most basic protocol to follow immediately after injury.

REST

Stop the activity that you were doing when the injury occurred and rest the injured area. This reduces the risk of further damage as well as decreasing bleeding, swelling and consequently pain. Rest does not necessarily refer to a prolonged period of rest but rather immediate rest from the activity that lead to the injury. This is often difficult because one tends to want to "run it off" but repetitive minor injuries may lead to a major injury in the future.

ICE

Ice (also known as cryotherapy) is one of the easiest, cheapest, most effective and most widely used methods of acute injury management. The application of ice has four main effects:

1. Causes vasoconstriction thereby decreasing bleeding into the injury site and so decreases swelling
2. Decreases pain by slowing the transmission of nerve impulses to the brain and by making the area feel numb
3. Decreases muscle spasm
4. Decreases the metabolic rate and so reduces the risk of cell death

Ice can be in the form of ice cubes or crushed ice or a cold pack (or even a bag of frozen peas). The ice should not be applied directly to the skin; rather wrapped in a towel or plastic. The ice should be left in place for 15 to 20 minutes.

COMPRESSION

Compression of the injured area also decreases swelling by reducing the amount of fluid that leaks out of the blood vessels. This also decreases the risk

of cell death. Although swelling occurs rapidly after injury, getting rid of it is a slow process. Compression immediately after injury can dramatically improve the recovery time; something every athlete wants. An elastic bandage can be used to compress the injured area. It is useful to combine compression with the application of ice.

ELEVATION

Elevation refers to keeping the injured area higher than or at the same level as the heart. This makes use of one of nature's most basic laws: gravity. Gravity assists the lymphatic system in the re-absorption of the fluid that causes swelling.

But what about heat?

The R.I.C.E protocol is centred around reducing swelling. The application of heat causes vasodilation and so causes more blood to flow to the injured area. This results in increased bleeding, swelling and pain and may increase secondary injury due to cell death. Although applying heat may be more comfortable than applying ice, it can prolong your recovery. This means that you should not take a hot bath immediately following an injury. You should also not drink alcohol as it has a vasodilatory effect with the same consequences as heat. Also avoid massage during these early stages as this also causes vasodilation.

And then what?

See your physio ASAP!